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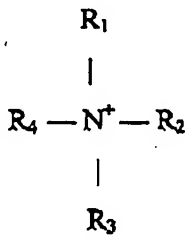
In the Claims:

1. (Previously presented) A solution useful for removing a barrier material from a semiconductor substrate comprising by weight percent 0.01 to 25 oxidizer, 0 to 15 inhibitor for a nonferrous metal, 0 to 15 abrasive, 0 to 20 complexing agent for the nonferrous metal, 0.01 to 12 barrier removal agent selected from imine derivative compounds, hydrazine derivative compounds and mixtures thereof, 0.01 to 10 organic-containing ammonium salt formed with



R_1, R_2, R_3 and R_4 are radicals, R_1 has a carbon chain length of less than 15 carbon atoms and balance water; and the solution has a pH less than 7 and a tantalum nitride to CDO selectivity of at least 2 to 1 as measured with a microporous polyurethane polishing pad with at least one pressure measured normal to a wafer of equal to or less than 13.8 kPa.

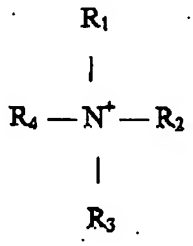
2. (Previously presented) The solution of claim 1 wherein the barrier removal agent is imine derivative compound and the imine derivative compound is present in an amount of 0.1 to 10 weight percent.

3. (Previously presented) The solution of claim 1 wherein the oxidizer is selected from hydrogen peroxide, monopersulfates, iodates, magnesium perphthalate, peracetic acid, persulfates, bromates, perbromates, perchlorates, periodates, ferric nitrate, iron salts, cerium salts, Mn (III) salts, Mn(IV) salts and Mn (VI) salts, silver salts, copper salts, chromium salts, cobalt salts, halogens, hypochlorites and mixtures thereof.

4. (Previously presented) The solution of claim 1 wherein the imine derivative compound is selected from acetamidine hydrochloride, amino-guanidine hydrochloride, arginine, formamidine, formamidinesulfinic acid, formamidine acetate, 1,3-diphenyl guanidine, 1-methyl-3-nitroguanidine, guanidine hydrochloride, tetramethylguanidine, 2,2-azobis (dimethyl-propionamidine)di-HCl, guanidine sulfate, guanidine acetic acid, guanidine carbonate, guanidine nitrate and mixtures thereof and the hydrazine derivative compound is

selected from carbohydrazide, imidazole, acetic hydrazide, semicarbazide hydrochloride, 1,2-diformylhydrazine, methylhydrazino-carboxylate, oxalic dihydrazide, acetone azine and formic hydrazide and mixtures thereof.

5. (Cancelled) A solution useful for removing a barrier material from a semiconductor substrate comprising by weight percent 0.1 to 15 oxidizer, 0 to 10 inhibitor for a nonferrous metal, 0 to 5 abrasive, 0 to 10 complexing agent for the nonferrous metal, 0 to 10 oxidizer, 0.1 to 10 barrier removal agent selected from acetamidine, acetamidine salts, acetamidine derivatives, arginine, arginine salts, argine derivatives, formamidine, formamidine salts, formamidine derivatives, guanidine derivatives, guanidine salts and mixtures thereof, 0.01 to 10 organic-containing ammonium salt formed with



R_1, R_2, R_3 and R_4 are radicals, R_1 has a carbon chain length of less than 15 carbon atoms and balance water and the solution has a pH less than 7.

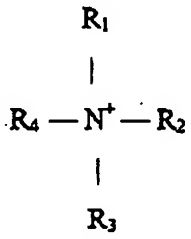
6. (Cancelled) The solution of claim 5 wherein the imine derivative compound is selected from acetamidine hydrochloride, amino-guanidine hydrochloride, arginine, formamidine, formamidinesulfinic acid, formamidine acetate, 1,3-diphenyl guanidine, 1-methyl-3-nitroguanidine, guanidine hydrochloride, tetramethylguanidine, 2,2-azobis (dimethyl-propionamidine)di-HCl, guanidine sulfate, guanidine acetic acid, guanidine carbonate, guanidine nitrate and mixtures thereof and the hydrazine derivative compound is selected from carbohydrazide, imidazole, acetic hydrazide, semicarbazide hydrochloride, 1,2-diformylhydrazine, methylhydrazino-carboxylate, oxalic dihydrazide, acetone azine and formic hydrazide and mixtures thereof, and the barrier removal agent is 0.2 to 6 weight percent.

7. (Cancelled) The solution of claim 5 wherein R_1 is a substituted or unsubstituted aryl, alkyl, aralkyl, or alkaryl group that comprises 2 to 5 carbon atoms.

8. (Cancelled) The solution of claim 5 wherein the ammonium salt is formed with a compound selected from tetramethyl ammonium, tetraethyl ammonium, tetrabutylammonium, benzyltributylammonium, benzyltrimethylammonium, benzyltriethylammonium, diallyldimethylammonium, diethylaminoethyl methacrylate, dimethylaminoethyl methacrylate, methacryloyloxyethyltrimethylammonium, 3-(methacrylamido) propyltrimethylammonium, triethylenetetramine, tetramethylguanidine, hexylamine and mixtures thereof.

9. (Cancelled) A method for removing a barrier material from a semiconductor wafer comprising the steps of:

contacting a wafer substrate with a polishing solution, the wafer substrate containing a barrier material, a TEOS dielectric layer and a second dielectric layer, the second dielectric layer having a dielectric constant lower than the TEOS dielectric layer and the polishing solution containing by weight percent 0.01 to 25 oxidizer, 0 to 15 inhibitor for a nonferrous metal, 0 to 15 abrasive, 0 to 20 complexing agent for the nonferrous metal, 0.01 to 12 barrier removal agent selected from imine derivative compounds, hydrazine derivative compounds and mixtures thereof, 0.01 to 10 organic-containing ammonium salt formed with



R_1, R_2, R_3 and R_4 are radicals, R_1 has a carbon chain length of less than 15 carbon atoms and balance water; and the solution has a pH less than 7 and a tantalum nitride to CDO selectivity of at least 2 to 1 as measured with a microporous polyurethane polishing pad with at least one pressure measured normal to a wafer of equal to or less than 13.8 kPa;

polishing the wafer substrate with a polishing pad to remove the barrier material from the wafer substrate; and

polishing the wafer substrate with the polishing pad to remove at least a portion of the TEOS dielectric layer from the wafer substrate and leave the second dielectric layer.

10. (Cancelled) The method of claim 9 wherein the second dielectric layer is a carbon doped oxide layer, the TEOS dielectric layer covers the carbon doped oxide and the polishing solution contains an organic-containing ammonium salt that accelerates TEOS removal rate during the polishing.

11. (Previously presented) The solution of claim 1 wherein the solution is abrasive-free.

12 (Cancelled) The solution of claim 5 wherein the solution is abrasive-free.